What is a family cancer clinic?

If you feel you may be at high risk of developing breast cancer, you can talk to your doctor about referral to a family cancer clinic. There you will see a genetic counsellor or specialist doctor trained in genetics. They will take a detailed family history to define your risk and discuss your options with you. They may arrange genetic testing and may discuss ways to reduce your risk of breast cancer. Family cancer clinics also investigate family history of other cancers such as bowel cancer.

What is genetic testing?

There are several genes which may contain inherited faults linked to the development of breast cancer and can also be associated with ovarian cancer. The most well-known of these genes are called BRCA1 and BRCA2. Faults (pathogenic variants) in these genes can be detected using a blood test. Usually, a sample of blood is first taken from a woman in the family who has developed breast cancer or ovarian cancer. The DNA is "searched" for a gene fault. If a gene fault is detected, then other family members can be tested to see if they carry the same fault.
This testing is recommended only in certain circumstances. The testing is only done under the supervision of a specialised clinic. There are pros and cons to genetic testing, and these will be discussed with you at a family cancer clinic.

I have had breast cancer—what does this mean for my daughter?

Many women who have had breast cancer are concerned about the risk that this diagnosis carries for their daughters. You can estimate your daughter's risk of breast cancer using the information in this brochure to determine her risk category. She may be above the average risk if you were diagnosed with breast cancer before the age of 50, or if a number of your relatives have developed breast or ovarian cancer.

Your daughter should speak to her doctor in more detail about her individual risk. It is possible that she may be recommended to start surveillance earlier and have mammograms every year rather than every two years. Finally, if the family history is stronger, the doctor may suggest a referral to a family cancer clinic.

Contact numbers

Westmead Breast Cancer Institute	8890 6728
Westmead Hospital Familial Cancer Service	8890 6947
Cancer Council Cancer Helpline	13 11 20
BreastScreen Australia	13 20 50
NSW Genetics Education Program	9926 7324

If you are in a country area, the services above will help you find your closest family cancer clinic.

For health professionals

iPrevent is an online tool designed to assess an unaffected female's risk of developing breast cancer based on her family history and personal risk factors. The tool also provides potential risk management options, including identifying women who should be referred to a Family Cancer Clinic. Your patient can input their information and known family history into this tool and can discuss the generated report with you. Alternatively, you can do it together. iPrevent is free and can be accessed through: www.petermac.org/patients-and-carers/health-services-for-cancer-patients/cancer-prevention/iprevent

Useful contacts/websites

Cancer Australia	canceraustralia.gov.au
Cancer Council	cancer.org.au
Cancer Council Helpline	13 11 20
Breast Cancer Network Australia (BCNA)	1800 500 258 bcna.org.au

iPrevent - assess your risk of developing breast cancer: www.petermac.org/patients-and-carers/health-services-for-cancer-patients/cancer-prevention/iprevent

Centre for Genetics Education - find your local Family Cancer Clinic: www.genetics.edu.au/SitePages/Genetic-Services.aspx

Supporting People with Breast Cancer Today and Every Day

- Providing screening, diagnosis, treatment and care by expert teams
- With world-class research, education and innovation
- Engaging the help of our community and supporters
- To shine a Ray of Hope

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Family History of Breast Cancer

Westmead Breast Cancer Institute

Family History of Breast Cancer

Breast cancer is a common disease. In Australian women, the lifetime risk of developing breast cancer is 1 in 8 (before the age of 85). Many women have someone in their family who has had breast cancer; this can happen by chance, as the disease is so common.

Rarely, breast cancer can be caused by a fault in a gene that can be passed through families from one generation to the next. These faults can be inherited from either the mother's side or the father's side of the family.

Approximately 5-10% of all breast cancer cases are related to an inherited genetic fault. This means that in more than 90% of breast cancer cases, the disease occurs by chance rather than because of a genetic fault in the family.

Ovarian cancer and cancer of the fallopian tube (which joins the ovary to the womb) sometimes has an association with breast cancer. Some of the same genetic faults that make a person more likely to develop breast cancer may also make a person more likely to develop ovarian cancer.

Genetic counselling and testing through a family cancer clinic may help families who suspect that they have an inherited gene fault.

What features of family history are important?

Your risk of developing breast cancer may be higher than that of the average woman if your family history includes several close relatives with either breast cancer or ovarian cancer, especially if the breast cancer was diagnosed in a relative much younger than the average age for breast cancer. The average ago for a diagnoses of breast cancer in in the early 60s.

In addition, families with an inherited high risk gene fault tend to have some of the following features:

> Women diagnosed with breast cancer at a young age (often before the age of 40

> Women who develop cancer in both their breasts

> Women who develop ovarian cancer

> Women who develop both breast and ovarian cancer

> Men who develop breast cancer as well as women

> Ashkenazi Jewish ancestry

What is your risk?

Your risk of developing breast cancer can be categorised into three groups:

> Category 1 - at risk or slightly above average risk

> Category 2 - moderately increased risk

> Category 3 - potentially high risk

Remember,

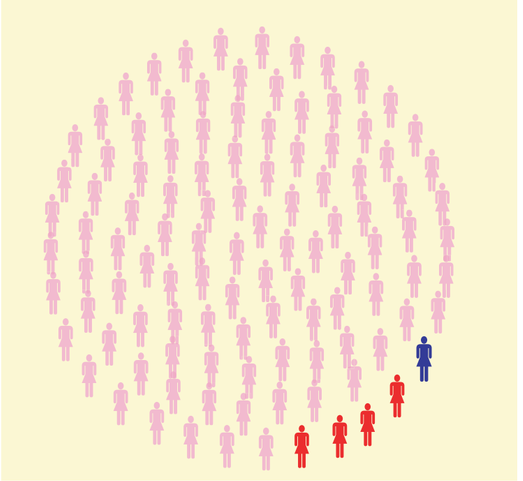
> Nobody has a 0% risk of developing breast cancer, and

> Nobody has a 100% risk of developing breast cancer

Risk Categories

You can estimate your risk of developing breast cancer by looking at your family history in detail. If there is a family history of breast cancer, you can catergorise your risk using an online tool called iPrevent: www.petermac.org/patients-and-carers/health-services-for-cancer-patients/cancer-prevention/iprevent.

You will fit into one of the three risk categories.



Category 1: At or slightly above average risk

The risk of developing breast cancer in this group is the same or only slightly higher than the average woman in the general population.

90% of women in this group will not develop breast cancer.

Category 2: Moderately increased risk

The risk of developing breast cancer in this group is moderately increased compared to that of the general population.

Category 3: Potentially high risk

The risk of developing breast cancer in this group is significantly higher than that of the general population.

How do I monitor my breasts if I have a family history?

The following recommendations apply to all women with or without a family history of breast cancer:

> Be "breast aware"— this means examining your own breasts often enough to be familiar with how they normally feel. This will increase your chances of detecting a change. See the Breast Health brochure for more information.

> See a doctor promptly with any breast changes.

> Have a breast examination performed by a doctor every year.

> Begin having screening mammograms every two years from the age of 40-50.

The recommendations for extra monitoring depend on the risk category you are in.

Category 1: At or slightly above average risk

> Monitor your breasts as outlined in the previous paragraph.

Category 2: Moderately increased risk

> Follow the recommendations for Category 1, above.

> In addition, it may be recommended that you:

- Start having screening mammograms at the age of 40
- Have your screening mammograms every year rather than every two years from the age 40-50
- Consider the use of medication, such as tamoxifen or raloxifene, to reduce risk of developing breast cancer. This requires careful assessment of risk and benefits in the individual case by an experienced medical professional.

You may like to consider the option of being referred to a family cancer clinic to discuss your personal risk and recommendations in more detail.

Category 3: Potentially high risk

> You should be referred to a Family Cancer Clinic to discuss:

- Your personal risk in more detail
- Whether any genetic testing should be undertaken by you or your family.
- Risk management options, which could include yearly breast surveillance (mammograms or breast MRI) and the possible use of risk-reducing medications. The age at which these should commence will be individualised to you
- If there is an associated strong family history of ovarian cancer, a discussion about your ovarian cancer risk